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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/643,962 | 08/20/2003 | Robert D. Larsen | 3395-117 | 5011 |
| 22429 | 7590 | 10/13/2004 | | EXAMINER |
| LOWE HAUPTMAN GILMAN AND BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 /310 ALEXANDRIA, VA 22314 | | | HYEON, HAE M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2839 | |

DATE MAILED: 10/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------|-------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/643,962 | LARSEN, ROBERT D. | |
| | Examiner Hae M Hyeon | Art Unit 2839 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 September 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-40 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 September 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on September 27, 2004. These drawings are approved.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knowles (4,017,143) in view of Yaegashi (4,737,114).

In the present specification page 11, the second paragraph under “DETAILED DESCRIPTION” stated that the electrical contact 100 of the instant invention is similar to the electrical contact of Figs. 1-9, which disclosed in the reference of Knowles, with the exception that a slot 150 has been added to the C-shaped center portion 130. Thus, the examiner will not describe the structure of the contact 100 of Knowles, but only focus on the missing slot.

While Knowles does not disclose or teach the contact 100 having a slot Yaegashi discloses an electrical contact 3 having a compliant part 30 with a slot 33 that provides an easy fitting of the contact 3 into a small plated aperture 2 of a circuit board (see Column 1, lines 59-61).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the contact taught by Knowles such that it would have a slot as

taught by Yaegashi because the slot provides an easy fitting of the contact into a small plated aperture of a circuit board. Furthermore, a compliant part of an electrical contact having a slot is well known for providing press-fit insertion of the contact in the aperture of the circuit board by providing a sufficient holding force to hold the contact within the aperture of the circuit board.

Response to Arguments

4. Applicant's arguments filed on September 1, 2004 have been fully considered but they are not persuasive.

The applicant argues that because claims 1,19, 20, 21, 39 and 40 of the instant invention recites the slot in the center section or the C-shaped cross section, the ordinary artisan would need look no further than Knowles because Knowles teaches away from the addition of the slot. The applicant pointed out the column 3, lines 29-32 for the reason. The examiner disagrees with the applicant's view because the second paragraph in the "SUMMARY OF THE INVENTION" of the present specification stated, "To overcome the disadvantage noted above, the present inventor has found that by adding a small slot to the C-section, an electrical contact can be produced having an insertion force that is lower than the insertion force of the electrical contact of Knowles but still retains an adequate retention force." Clearly, the present invention looked on the electrical contact of Knowles and improved it by adding a small slot. Thus, the applicant's argument about the ordinary artisan would not look further on Knowles is not persuasive. Next, the applicant argues that Yaegashi is only directed to reducing the damage to the plated aperture as opposed to making the insertion of the contact into the aperture easier. The examiner disagrees because Yaegashi clearly stated in the first paragraph of the "SUMMARY

OF THE INVENTION" that an objective of the invention is to provide an electrical contact pin useful for an easy to fit into a small plated aperture of a circuit board. This means that the contact pin is easy to insert into an aperture. Thus, the examiner believes the rejection stated in the previous office action filed on June 1, 2004 is appropriate.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M Hyeon whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C Patel can be reached on (571) 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hae M Hyeon
Primary Examiner
Art Unit 2839

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Hae Moon Hyeon